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ABSTRACT

A study was conducted to investigate the effects of the correlates and problem areas affecting career decision making and specifically to test the validity of the O'Neil, Meeker & Borgers' (1978) model. A cross-sectional sample of high school, undergraduate, and graduate students (N=1,436) responded to the Career Factor Checklist (CFC) and reported the degree to which the six general factors and twenty-two sub-factors identified by the O'Neil et al. model have affected their career decision making. Data were analyzed using factor analysis and analysis of variance procedures. The results of the factor analysis indicated that the CFC measured the career choice factors identified by the O'Neil et al. model. A significant grade main effect and significant sex by grade interactions were found for four of the six factors assessed. Results of the data analysis indicated positive support for the O'Neil et al. model and the hypothesized factors affecting the career-decision-making process. Implications were drawn for individual counseling and for preventive programming around career correlates in decision making. Future research was recommended for greater understanding of the correlates of career choice and problem areas affecting career decisions. (Author/BM)

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FACTORS, CORRELATES, PROBLEM AREAS AFFECTING
CAREER DECISION MAKING OF A CROSS-SECTIONAL
SAMPLE OF STUDENTS

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Abstract

The correlates of career choice and the problem areas affecting career decisions are important to counseling psychologists. They are important to understanding the complexities of vocational behavior, facilitating differential treatment in counseling, and developing preventive career programs for men, women, and special groups. This research investigates the effects of the correlates and problem areas affecting career decision making and specifically tests the validity of the O'Neil, Meeker & Borgers' (1978) model. A cross-sectional sample of high school, undergraduate, and graduate students (N=1436) responded to the Career Factor Checklist (CFC) and reported the degree to which the six general factors and 22 sub-factors identified by the O'Neil et al. (1978) model have affected their career decision making. Data were analyzed using factor analysis and analysis of variance procedures. The results of the factor analysis indicated that the CFC measured the career choice factors identified by the O'Neil et al. (1978) model. A significant grade main effect and significant sex by grade interactions were found for four of the six factors assessed. Results of the data analysis indicated positive support for the O'Neil et al. (1978) model and the hypothesized factors affecting the career decision making process. Implications of the results are discussed for individual counseling and for preventive programming around career correlates in decision making. Future research is recommended for greater understanding of the correlates of career choice and problem areas affecting career decisions.

FACTORS, CORRELATES, PROBLEM AREAS AFFECTING
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The correlates of the career choice process are those factors that affect an individual's selection of a career. Reviewing these factors, Crites (1969) indicates that career development theorists have emphasized different correlates in explicating their theories (Roe, 1957; Bordin, Nachmann & Segal, 1963; Holland, 1973; Super, 1957). He describes the correlates in terms of stimulus, organismic, and response variables. Stimulus variables include culture, social class, race, geographic region, community, family, school and church. Organismic variables include general aptitudes, interests, and personality. In Crites' view, research on the correlates of career choice is important for three reasons: a) to understand individual differences in career choice, b) to better understand the differential patterns in career development, and c) to develop an empirical basis in career development theory and practice.

Related to the correlates of career choice are specific problem areas that affect career decision making. Systems for defining vocational problems have been specified by past theoreticians and researchers (Crites, 1969), and both sociological and psychological definitions have been proposed (Berezin, 1957; Bordin, 1946; Byrne, 1958; Pepinsky, 1948; Williamson, 1939). The nature of vocational problems was first categorized as no choice, uncertain choice, unwise choice, and discrepancy between interests and

aptitudes (Williamson, 1939). Later, Bordin (1946) formulated five problem categories including dependence, lack of information self-conflict, choice anxiety, and no problem. Pepinsky (1948) researched Bordin's diagnostic constructs and changed the no-problem category to lack of assurance and subdivided the self-conflict category into three different types of conflict problems. These self-conflict areas include: (a) cultural self-conflict (limitations and restrictions placed upon the individual by the environment or culture group), (b) interpersonal self-conflict (precipitated by the criticism of parents and others on an individual's goals and objectives), and (c) intrapersonal self-conflict (stimulated as a result of conflict between desired and imposed roles). Berezin (1957) proposed a two-dimensional classification around content and causes of counseling problems. The content categories were emotional, educational, and vocational areas, and the causes included: (a) intrapersonal conflict (conflict between self-motives), (b) interpersonal conflict (conflict in motivation between self and significant others), (c) environmental conflict (conflict between the self and the culture, society, or situation), (d) developmental considerations (lack of experience), (e) lack of skill, (f) lack of self understanding, (g) lack of information, and (h) self-actualization.

There is a limited body of empirical evidence available for evaluation of the proposed systems defining vocational problem areas and the correlates of career choice (Crites, 1969). Research is needed to assess the correlates of career choice and the

specific problem areas that inhibit career decision making (Jones & Jung, 1978). Osipow (1973) indicates that research is needed to assess the factors that influence career decisions, such as familial, social, situational, and age variables. In the annual review of vocational behavior and career development, Betz (1977) recommends that research be completed on the variables that restrict individual alternatives in career planning. In last year's annual review, Zytowski (1978) included a section on the correlates of career choice. Additionally, research has recently assessed how gender, sex role attitudes, and cognitive style affect the decision making process (Harren, Kass, Tinsley & Moreland, 1978, 1979; Moreland, Harren, Krinsky-Montague & Tinsley, 1979). Two of these studies recommend that further research be completed on other career factors that influence decisional status (Harren et al., 1978) and predict gender-dominant career choices (Harren et al., 1979). Moreland et al. (1979) recommend that counselors should consider sex role and non-sex-role-related factors in helping students make career-related decisions.

The identification, understanding, and empirical validation of the correlates and problem areas affecting career decisions are important to counseling psychologists. This information can facilitate the diagnosis of clients' problems in career counseling and the implementation of effective counseling interventions. Additionally, if the correlates can be identified and their differential effect on males and females at different educational

levels can be understood, it will help practitioners to develop counseling treatments and preventive programs that are matched to the unique problems of the sexes at different educational levels.

The purpose of this research was to assess the effects of six general factors and 22 sub-factors identified by the O'Neil, Meeker & Borgers (1978) model (see Figure 1) on the career decision making of a cross-sectional sample of high school, undergraduate, and graduate students (N=1436). The O'Neil et al. model is based on previous theories of career development

Insert Figure 1 About Here

(Bordin, Nachmann & Segal, 1963; Holland, 1973; Roe, 1957; Super, 1957; Super & Bachrach, 1957), correlates of career choice (Blau, Parnes, Gustod & Jessor, 1968; Crites, 1969), social systems approach to career development (Osipow, 1973), social learning theory of career selection (Krumboltz, Mitchell & Jones, 1978), specific aspects of men's and women's career development (Crites, 1969; Mishler, 1975; Osipow, 1975; Psathas, 1968; Senesh & Osipow, 1973; Zytowski, 1969), and theory about sex role development (Kagan, 1964; Kohlberg, 1966; Mischel, 1970; Mussen, 1969).

This model hypothesizes that the individual, societal, familial, socioeconomic, situational, and psychosocial-emotional factors affect both the sex role socialization and the career decision making processes. The individual factor includes self-expectancies, abilities, interests, attitudes, and achievement

needs. The societal factor includes educational experiences, peer group influences, and mass media. Childhood experiences, mother's role model, and father's role model comprise the familial factor. The socioeconomic factor includes social class, race, sex discrimination, and the supply and demand of jobs. The situational factor includes chance and the course of least resistance. The psychosocial-emotional factors (fear of failure, fear of success, lack of confidence, lack of assertiveness, and role conflict) are defined as problem areas that can potentially influence restrict, or limit personal and career development (O'Neil & Bush, 1978). These factors have been identified from past literature as affecting career decisions (Birney, Burdick & Teevan, 1969; Farmer, 1978; Horner, 1972; Jakubowski-Spector, 1973; Mishler, 1975; Osipow, 1973, 1975; Tresemer, 1977). Additionally, these factors parallel previous vocational problem areas such as interpersonal conflicts, intrapersonal conflicts, and environmental-cultural conflicts (Berezin, 1957; Bordin, 1946; Pepinsky, 1948).

Two hypotheses were assessed in this study. First, it was hypothesized that the 22 sub-factors of the O'Neil et al. (1978) model would cluster into six general factors. Second, it was hypothesized that there would be significant sex and grade differences on the six factors.

Method

Subjects

Students (N=1436) from one high school (N=177) and two large

midwestern universities (N=580 and 679) were administered the Career Factor Checklist (CFC) (O'Neil & Ohlde, Note 1). University students were administered the CFC in both classroom and residence hall settings. High school students were graduating seniors and were polled in various classrooms (N=177). The final sample of 600 males and 836 females was distributed by sex and grade as follows: high school (67 males, 110 females), college freshmen (197 males, 289 females), sophomores (70 males, 132 females), juniors (83 males, 103 females), and seniors (69 males, 71 females), graduate students (105 males, 110 females) and special students (9 males, 21 females).

Instrumentation

The Career Factor Checklist (CFC) (O'Neil & Ohlde, Note 1) was developed from the O'Neil et al. (1978) model and asks respondents to indicate on a five-point Likert scale ("very much" to "not at all") the degree to which the following factors affect their career decision making: (1) familial factors including early childhood experiences, mother's role model, and father's role model, (2) societal factors including educational experiences, peer group influences, and mass media, (3) individual factors including self-expectancies, abilities, interests, attitudes, and achievement needs, (4) socioeconomic factors including social class, race, sex discrimination, and supply and demand of jobs, (5) situational factors including chance and the course of least resistance, and (6) psychosocial-emotional factors including fear of failure, fear of success, lack of confidence,

lack of assertiveness, and role conflict. Hoyt (1941) reliability coefficients for the six factors of the CFC ranged from .65 to .81. The following test-retest reliabilities over a four-week period were established for each of the CFC factors and for the CFC's total score: Familial Factor ($r_{tt}=.73$); Societal Factor ($r_{tt}=.80$); Individual Factor ($r_{tt}=.52$); Socioeconomic Factor ($r_{tt}=.49$); Situational Factor ($r_{tt}=.52$); Psychosocial-Emotional Factor ($r_{tt}=.83$); total score of CFC ($r_{tt}=.83$).

Analysis

The CFC responses for the total samples of males and females were factor analyzed using the BMDP principal components factor analysis program. Items with factor loadings of at least .30 were used to define the factors. The degree of effect for each of the six factors for each sex was then calculated by means of a two-factor analysis of variance (sex by educational level). A separate analysis was conducted for each factor.

Results

The results of the factor analysis of 28-item CFC indicated that the 22 sub-factors on the O'Neil et al. (1978) model clustered into the six factors (Individual, Societal, Familial, Socioeconomic, Situational, Psychosocial-Emotional) identified in the original scale. The mean factor loadings for each of the six factors for males varied between .64 (Societal factor) and .81 (Individual factor). For females, the mean factor loadings for these factors varied between .59 (Societal) and .90 (Individual).

The Familial factor explained the largest proportion of the variance for both males and females (5% and 7%, respectively). The CFC factors explained 16% of the total variance for males and 18% of the total variance for females.

Table 1 shows the means and standard deviations for the six factors for males and females at each of the six grade levels.

Insert Table 1 About Here

Inspection of the means indicates that the subjects reported the effects of the six factors on their career decision making in the following order from "most effect" to "least effect":

Individual, Familial, Societal, Psychosocial-Emotional, Socio-economic, and Situational. Subjects reported that the six factors affected them very much or somewhat in the following percentages: Individual (84%); Familial (50%); Societal (47%); Socioeconomic (35%); Situational (25%); and Psychosocial-Emotional (21%). Subjects reported that the six factors affected them "very little" or "not at all" in the following percentages: Psychosocial-Emotional (67%); Socioeconomic (53%); Societal (53%); Situational (48%); Familial (37%); Individual (12%). Subjects reported that the Psychosocial-Emotional Factors affected them very much or somewhat in the following percentages: Role Conflict (27%); Fear of Failure (26%); Lack of Confidence (20%); Lack of Assertiveness (17%); and Fear of Success (14%).

Univariate analysis of variance (sex by educational level)

were calculated for the six factors of the CFC. Analyses of the scores for Factor I (Familial) and Factor II (Societal) indicated no significant main or interaction effects. Significant sex by educational level interactions were found for Factor III (Individual) $F(6,1422)=8.35$, $p < .01$; Factor IV (Socioeconomic) $F(6,1422)=2.57$, $p < .01$; Factor VI (Psychosocial-Emotional) $F(6,1422)=2.44$, $p < .01$. Figures 2,3, and 4 shows these interactions.

Insert Figures 2, 3, and 4 About Here

The interaction patterns for the Individual and Socioeconomic Factors were similar. Freshmen, sophomore, and special student females reported that the Individual and Socioeconomic Factors have had a lesser effect on their career decision making than males at those educational levels ($p < .05$). High school seniors and junior and senior college females indicated that they were more influenced than males by the Individual and Socioeconomic Factors ($p < .05$). Additionally, freshmen, sophomore, and senior women reported that Psychosocial-Emotional Factors affected their career decision making to a greater degree than did men at these educational levels ($p < .05$). Less affected by these psychosocial-emotional factors were junior and special student females.

Analysis of the data for Factor V (Situational) showed a significant main effect for educational level, $F(6,1422)=7.45$, $p < .01$. Newman-Keuls post hoc analyses indicated that the student groups differed significantly on the degree of effect of the situational factor in the following ways: sophomore, freshmen,

and high school students reported the situational factor to affect them significantly more than junior, special, and graduate students; seniors reported that the situational factor affected them more than graduate students; freshmen, sophomore, and high school students reported that the situational factor affected them significantly more than junior and special students; high school, freshmen, sophomore, and senior students reported that the situational factor affected them significantly more than graduate students ($p < .05$). All other post hoc comparisons were non-significant.

Discussion

The results provide positive support for that part of the O'Neil et al. (1978) model that hypothesizes six factors as affecting the career decision making process. Factors corresponding to the Individual, Societal, Familial, Socioeconomic, Situational, and Psychosocial-Emotional factors were identified for the samples of both male and female students. However, the percent of variance explained by the factors is small (16% for males; 18% for females), and caution must be exercised in interpreting the factors as principal determinants affecting career decision making. Furthermore, the grand mean for the factors suggests that only the Individual Factor was mentioned by the total group as having a moderately strong influence on career decision making.

The low percentage of variance accounted for in this study may be explained in several ways. First of all, the results may indicate

that the proposed factors are not the major factors that affect career decision making. This explanation would be contrary to what most career development theorists have hypothesized about the multiple factors affecting career decisions (Crites, 1969). Second, there may be other factors that affect career decision making that are not identified in the O'Neil et al. (1978) model, such as the organismic variables specified by Crites (1969) or the variables of community, geographic location, technological developments, social, political, and economic policy outlined by Krumboltz et al. (1978). Third, the sample may not be representative of students in general. Fourth, the sample's responses may be affected by their lack of knowledge of how the factors do affect them. Since most students lack life experience and are rarely exposed to information about the multiple factors affecting career decision making, they may be unable to assess the actual degree of effect of the factors. Limited life experience and lack of awareness of the effect of the factors may then explain the low variance. Future research should assess students' awareness of the correlates of career choice by exposing them to written or multi-media information. Exposing students and, particularly older adults, to media presentations that more fully describe the career choice factors and then assessing their self-report may provide more information about the actual impact of the correlates of career choice on decision making.

Eighty-four percent of the sample reported that the Individual Factor affected them "very much" or "somewhat." More than half the sample indicated that the Familial, Societal, Socioeconomic,

Situational, and Psychosocial-Emotional Factors affected them "very little" or "not at all." Thus, only the Individual Factor received high endorsement by the total sample. It appears that external factors (Familial, Societal, Socioeconomic and Situational) are perceived by 50% of the sample to have very little or no effect on their career decision making. These high percentages may imply that students are sheltered from the hard realities of how these factors operate and affect career decisions. Counselors may need to help clients better understand and clarify the effects of the external factors (family, society, socioeconomic status) on their career decisions.

The percentage of subjects indicating that one of the Psychosocial-Emotional factors affects them "very much" or "somewhat" varied between 14-27% for the total sample. Role Conflict, Fear of Failure and Lack of Confidence were expressed by more than one-fifth of the sample. These percentages of students self-reporting psychosocial-emotional problems suggests that counselors may need to make assessments of these factors during career counseling.

The correlates and problem areas in career decision making may affect individuals in significantly different ways. Students may need to consider many of these factors in career counseling but may not be able to systematically relate them in ways that will facilitate good decision making (Hewer, 1963). Thus, counseling practitioners could expose students to these factors and discuss their implications for the present and future. Since career

development theorists have indicated that career decisions are an interaction of internal personality characteristics and the effects of external environment (Bordin et al., 1963; Holland, 1973; Krumboltz, et al., 1978; Osipow, 1973; Roe, 1957; Super, 1957), counseling psychologists are encouraged to emphasize both personality and environmental factors during career counseling and other preventive interventions with students.

Significant sex by grade interactions on the Individual, Socioeconomic, Situational, and Psychosocial-Emotional Factors indicate that the perceived effect of these factors varies with sex and year in school. Males reported that the Individual and Socioeconomic Factors affect them early in college (freshmen and sophomore years) whereas females report that these factors affect them later (junior and senior years). Compared to males, freshmen, sophomore, and senior female students indicated that the Psychosocial-Emotional Factors affect them earlier in college (freshmen and sophomore years) and in their senior year of college. These results show that male and female college students report different effects for the factors depending on their year in school. However, since the study was a cross-sectional one, no developmental inferences should be drawn from these data.

Outreach programs could expose students to information about how the factors may affect them during their college years. Survey data could be gathered by administering the CFC and other measures to students and identifying groups of students who indicate that certain factors are affecting their career decision making. Pre-

ventive programs could be developed to facilitate students' integration of their individual career situations with the external forces and realities affecting their career decision making.

Future research needs to document the effects of these factors on career decision making. Additionally, the effect of these factors on the sex role socialization process and consequently the choice of gender-dominant careers needs to be assessed (Harren et al., 1978; 1979; Moreland et al., 1979). Since the percent of variance explained by the factors is small, future research is needed to better understand the nature of the correlates of career choice and problem areas. Additionally, research is needed to better understand how these correlates affect students differently by sex and grade level. Longitudinal studies across the high school, college, and adult working years would help explain the developmental aspects of the factors affecting career decision making. Program models and interventions for exposing students to the multiple factors affecting career decision making are beginning to emerge (Elkins, 1975; Harren, 1979; O'Neil, Ohlde, Barké, Prosser-Gelwick & Garfield, 1979, Note 2). Through these programs and more research on the correlates of career choice, counseling psychologists can help individuals understand the increasing complexities of career decision making in an increasingly complex and changing society.

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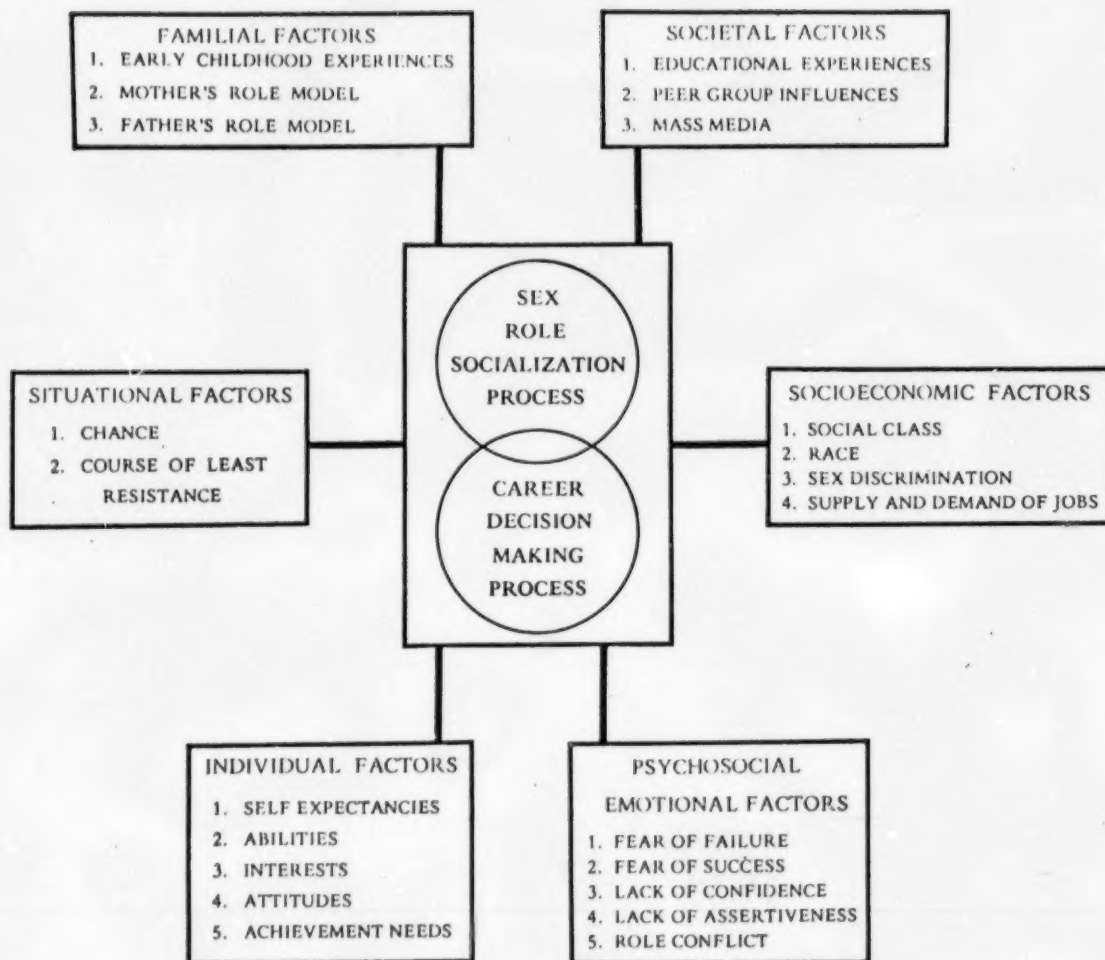


Figure 1: Factors Affecting the Sex Role Socialization and Career Decision Making Process

Table 1

Means and Standard Deviations of the Six Factors of the Career Factor Checklist (CFC) for Men and Women (N=1436)

FACTORS FROM THE CAREER FACTOR CHECKLIST¹

	Familial(I)		Societal(II)		Individual(III)		Socioeconomic(IV)		Situational(V)		Psychosocial-Emotional(VI)	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
<u>EDUCATIONAL LEVEL</u>												
High School												
M	13.04	12.56	12.67	12.40	25.79	27.00	10.33	9.40	8.76	7.75	11.37	10.85
SD	3.62	3.80	3.38	2.96	3.44	3.39	2.78	4.09	2.75	3.16	5.09	4.89
Freshmen												
M	12.35	12.57	12.41	12.56	26.30	22.57	9.85	11.01	8.05	8.13	11.16	11.88
SD	3.64	3.99	3.31	3.22	5.89	9.39	3.86	3.88	2.65	2.61	4.68	5.09
Sophomore												
M	12.96	12.50	12.24	12.67	27.11	23.12	10.14	10.49	8.11	8.44	10.64	12.40
SD	3.72	4.12	3.32	3.33	3.93	8.80	3.66	3.85	2.65	2.61	4.14	5.30
Junior												
M	12.49	12.95	12.46	11.58	26.96	27.21	9.17	8.76	7.31	7.22	10.09	9.03
SD	3.88	3.86	3.66	3.22	3.37	4.50	3.71	3.67	3.04	2.30	4.51	4.08
Senior												
M	12.97	12.80	11.88	12.45	26.46	26.93	9.59	8.92	7.24	8.21	9.41	10.90
SD	3.95	4.06	3.18	3.27	5.82	4.53	3.63	3.47	2.19	2.92	4.01	4.47
Graduate												
M	13.17	12.65	12.89	12.79	27.61	27.14	9.57	9.76	6.85	6.97	9.57	10.41
SD	3.66	3.71	2.98	3.11	2.67	3.75	3.49	3.88	3.03	2.91	4.18	4.29
Special												
M	13.78	11.95	11.56	11.24	28.20	17.57	11.56	10.19	8.22	6.85	11.33	9.05
SD	3.30	4.72	3.35	3.65	1.56	10.10	2.78	4.09	2.72	3.83	5.33	5.31
Grand Mean	12.68		12.43		25.52		9.96		7.80		10.86	

¹Item means will vary according to the number of questions in each factor of the Career Factor Checklist. The number of items in each factor of the CFC was: Familial (4), Societal (4), Individual (6), Socioeconomic (5), Situational (3), Psychosocial-Emotional (6).

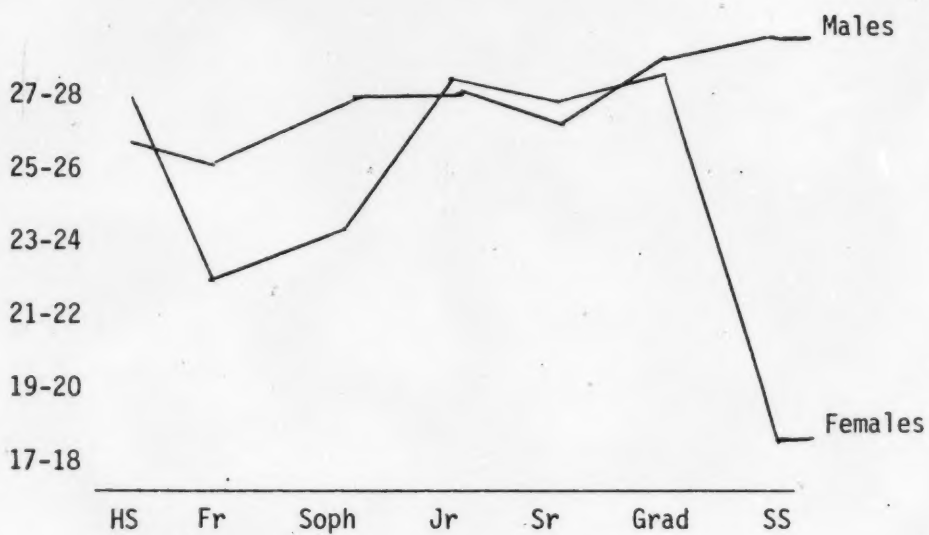


Figure 2: Plotted means for the Individual Factor for males and females at different educational levels.

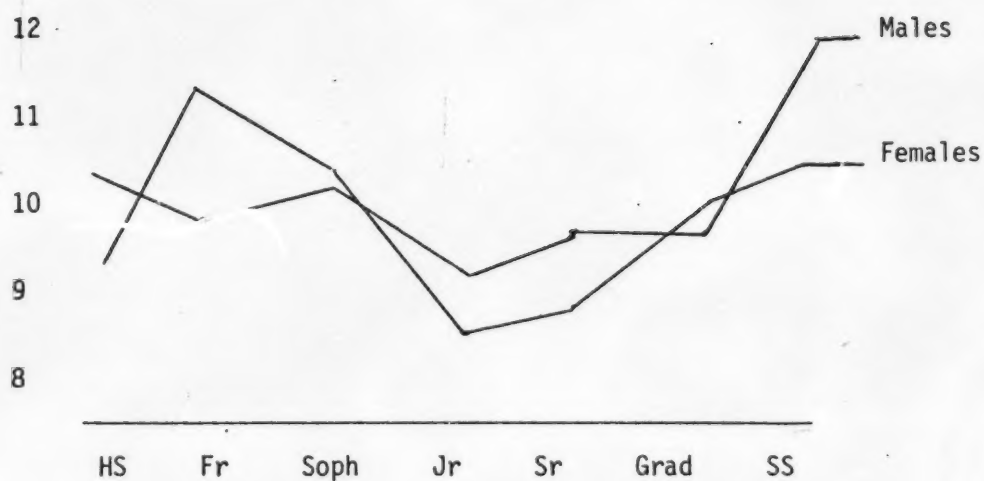


Figure 3: Plotted means for the Socioeconomic Factor for males and females at different educational levels.

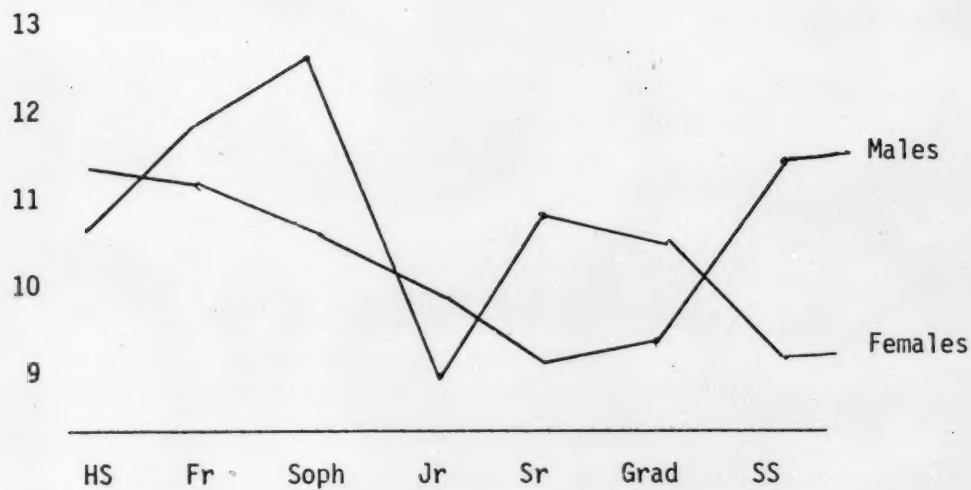


Figure 4: Plotted means for the Emotional Barriers Factor for males and females at different educational levels